

WHAT IS CLAIMED IS:

1. A method of manufacturing an image forming
apparatus having an envelope made of members inclusive
of a first substrate and a second substrate disposed at
5 a space being set therebetween, image forming means and
spacers disposed in the envelope, the spacers
maintaining the space, the method comprising the steps
of:

forming a spacer having a desired shape by cutting
10 a spacer base member; and

abutting the spacer upon the first substrate or
second substrate at non-cut surface of the spacer.

2. A method of manufacturing an image forming
15 apparatus according to claim 1, wherein said step of
forming a spacer having a desired shape forms a
plurality of spacers having the desired shape from the
spacer base member.

20 3. A method of manufacturing an image forming
apparatus according to claim 1, wherein said step of
forming a spacer having a desired shape forms a
conductive film on an end portion of the spacer base
member corresponding in position to abutting portion of
25 the spacer base member upon the first substrate or
second substrate, and cuts the spacer base member to
form the spacer having the desired shape.

4. A method of manufacturing an image forming apparatus according to claim 1, wherein said step of forming a spacer having a desired shape forms a conductive film on surfaces of the spacer base member, and cuts the spacer base member to form the spacer having the desired shape.

5. A method of manufacturing an image forming apparatus according to claim 1, wherein said step of forming a spacer having a desired shape includes a step of forming a first conductive film on surfaces of the spacer base member, a step of forming a second conductive film on opposite end portion of the spacer base member corresponding in position to abutting portion of the spacer base member upon the first substrate or second substrate, the second conductive film having a resistance lower than a resistance of the first conductive film, and a step of cutting the spacer base member formed with the first and second conductive films to form the spacer having the desired shape.

6. A method of manufacturing an image forming apparatus having an envelope made of members inclusive of a first substrate and a second substrate disposed at a space being set therebetween, image forming means and spacers disposed in the envelope, the spacers maintaining the space, the method comprising the steps

of:

forming a groove in a spacer base member and
cutting the spacer base member along the groove to form
a spacer having a desired shape; and

5 abutting the spacer upon the first substrate or
second substrate at cut surface of the spacer.

7. A method of manufacturing an image forming
apparatus according to claim 6, wherein said step of
10 forming a spacer having a desired shape forms a
plurality of spacers having the desired shape from the
spacer base member.

8. A method of manufacturing an image forming
15 apparatus according to claim 6, wherein said step of
forming a spacer having a desired shape forms a
conductive film on the groove of the spacer base
member, and cuts the spacer base member along the
groove to form the spacer having the desired shape.

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9. A method of manufacturing an image forming
apparatus according to claim 6, wherein said step of
forming a spacer having a desired shape forms a
conductive film on surfaces of the spacer base member
25 formed with the groove, and cuts the spacer base member
along the groove to form the spacer having the desired
shape.

10. A method of manufacturing an image forming apparatus according to claim 6, wherein said step of forming a spacer having a desired shape includes a step of forming a first conductive film on surfaces of the spacer base member formed with the groove, a step of
5 forming a second conductive film on the groove, the second conductive film having a resistance lower than a resistance of the first conductive film, and a step of cutting the spacer base member along the groove to form
10 the spacer having the desired shape.

11. A method of manufacturing an image forming apparatus according to claim 6, wherein the groove has a tapered shape.

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12. A method of manufacturing an image forming apparatus having an envelope made of members inclusive of a first substrate and a second substrate disposed at a space being set therebetween, image forming means and
20 spacers disposed in the envelope, the spacers maintaining the space, the method comprising the steps of:

forming a first conductive film on surfaces of a spacer base member and forming a second conductive film
25 on an end portion of the spacer base member corresponding in position to abutting portion upon the first or second substrate, the second conductive film

having a resistance lower than a resistance of the first conductive film;

cutting the spacer base member formed with the first and second conductive films to form a spacer
5 having a desired shape; and

abutting the spacer upon the first or second substrate.

13. A method of manufacturing an image forming
10 apparatus having an envelope made of members inclusive of a first substrate and a second substrate disposed at a space being set therebetween, image forming means and spacers disposed in the envelope, the spacers maintaining the space and each having a conductive film
15 at an abutting portion upon the first or second substrate, the method comprising the steps of:

immersing an end portion of a spacer base member into solution containing conductive substances to transfer the solution to the spacer base member;

20 heating the conductive substances to form the conductive film; and

abutting the end portion of the spacer base member formed with the conductive film upon the first or second substrate.

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14. A method of manufacturing an image forming apparatus according to claim 13, further comprising the

step of forming a conductive film on surfaces of the spacer base member, the conductive film having a higher resistance than the previously-cited conductive film.

5 15. A method of manufacturing an image forming
apparatus having an envelope made of members inclusive
of a first substrate and a second substrate disposed at
a space being set therebetween, image forming means and
spacers disposed in the envelope, the spacers
10 maintaining the space and each having a conductive film
at an abutting portion upon the first or second
substrate, the method comprising the steps of:

immersed an end portion of a spacer base member
formed by heating/drawing into solution containing
15 conductive substances to transfer the solution to the
spacer base member;

heating the conductive substances to form the
conductive film; and

abutting the end portion of the spacer base member
20 formed with the conductive film upon the first or
second substrate.

16. A method of manufacturing an image forming
apparatus according to claim 15, further comprising the
25 step of forming a conductive film on surfaces of the
spacer base member, the conductive film having a higher
resistance than the previously-cited conductive film.

17. A method of manufacturing an image forming apparatus according to any one of claims 1 to 16, wherein the first substrate is formed with electron emitting elements and the second substrate is formed with an image forming member for forming an image when electrons are applied from the electron emitting elements.

18. A method of manufacturing an image forming apparatus according to any one of claims 1 to 16, wherein the first substrate is formed with a plurality of electron emitting elements wired in a matrix form by a plurality of row and column wiring leads and the second substrate is formed with an acceleration electrode for accelerating electrons emitted from the electron emitting elements and a fluorescent member for emitting light when electrons are applied from the electron emitting elements.

19. A method of manufacturing an image forming apparatus according to claim 18, wherein the spacer is abutted upon the row or column wiring lead and upon the acceleration electrode.